

HP Dual-port 4x Fabric Adapter Quick Setup Instructions



Read instructions completely before beginning installation procedure.

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HP Dual-port 4x Fabric Adapter Quick Setup Instructions

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Introduction

This card provides instructions for installing the following Host Channel Adapters (HCAs):

- HP NC570C PCI-X Dual-port 4x Fabric Adapter
- HP NC571C PCI Express Dual-port 4x Fabric Adapter

Adapter Kit Contents

- One adapter
- This installation card
- Limited Warranty and Material Limitations Documentation

Installing the HCA in the server

WARNING: To avoid the risk of personal injury or damage to the equipment, consult the User’s Documentation provided with your equipment before attempting the installation.

Many computers are capable of producing energy levels that are considered hazardous. Users should not remove enclosures nor should they bypass the interlocks provided to protect one from these hazardous conditions.

Installation of this HCA should be performed by individuals who are both qualified in the servicing of computer equipment, and trained in the hazards associated with products capable of producing hazardous energy levels.

To reduce the risk of personal injury from hot surfaces, allow the internal system components to cool before touching.

Installing and Configuring HCAs

This section provides a brief overview for installing and configuring your HCAs. For more detailed instructions, refer to the *HP Dual-port 4x Fabric Adapter User Guide*. To locate HCA software and user documentation go to

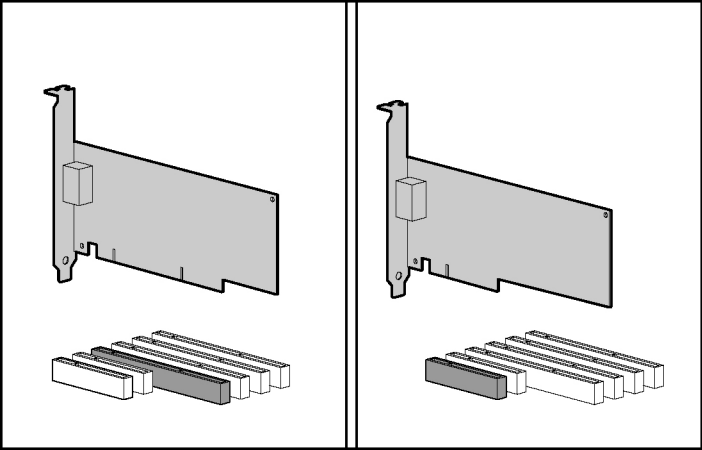
<http://support.hp.com/>

Select “Software & Driver downloads.” On the Software & Driver Downloads page, enter your product name, then click the double arrow.

IMPORTANT: PCI-X HCAs must be inserted in PCI-X slots. PCI Express HCAs must be inserted in PCI Express slots. Refer to the server user guide to verify the location of the PCI-X and PCI Express slots.

- Power down the server.
- Unplug the power cord and remove the server cover.
- Remove the cover bracket from the correct type of slot for your HCA (PCI-X or PCI Express).

- Firmly seat the HCA in the slot and secure the adapter bracket. The left illustration is an example of a PCI-X HCA and PCI-X slot. The right illustration shows a PCI Express HCA and PCI Express slot.



- Replace the server cover and plug in the power cord.
- Power on the host system.
- Download the software and documentation from the HP support website
<http://support.hp.com/>
- Install the software. The following software is provided:
 - HCA drivers
 - Internet Protocol over InfiniBand™ (IPoIB)
 - SCSI RDMA Protocol (SRP)
 - Sockets Direct Protocol (SDP)
 - User Direct Access Programming Library (uDAPL)
 - Message Passing Interface (MPI)
- Configure the HCA drivers.
 - Unzip the tar file containing the software using gunzip.
 - Extract the software into a local directory using tar.
 - Install the software. Refer to the *HP Dual-port 4x Fabric Adapter User Guide* provided with the software for instructions.
- Configure the HCA drivers.

Configure the IPoIB driver by assigning an IP address to interface ib0 and/or ib1, which corresponds to the two HCA ports. IPoIB drivers load when the interfaces are used for the first time.

To assign ib interfaces, enter **ifconfig ib# ip address netmask netmask**.

Example of one HCA:

```
# ifconfig ib0 192.168.0.0 netmask 255.255.255.0
#
# ifconfig ib1 192.168.0.1 netmask 255.255.255.0
#
```

Example of two HCAs:

```
# ifconfig ib0 192.168.0.0 netmask 255.255.255.0
#
# ifconfig ib1 192.168.0.1 netmask 255.255.255.0
#
# ifconfig ib2 192.168.0.2 netmask 255.255.255.0
#
# ifconfig ib3 192.168.0.3 netmask 255.255.255.0
#
```

- (Optional) Configure Message Passing Interface (MPI).
 - Setup rsh or ssh on two nodes so that you can run commands between a remote and local node without entering a login or password. This is required to use the MPI protocol.

Add paths to your environment PATH:

```
/usr/local/topspin/mpi/mpich/bin
/usr/local/topspin/bin
```

or

Add the paths for all users by adding the following line to your /etc/profile.d script:

```
export PATH=$PATH:/usr/local/topspin/mpi/
mpich/bin:/usr/local/topspin/bin
```
 - Configure all other drivers, including SDP. Refer to the *HP Dual-port 4x Fabric Adapter User Guide* for instructions.
- Plug InfiniBand cables from the host to the InfiniBand switch.
 - To plug in an InfiniBand cable, push the connector into the interface until you hear/feel a click.
 - Wiggle your connector back and forth and pull gently to be sure that both sides of the connector have locked firmly into place.
 - If your host does not provide an ample amount of free space around a given IB port, double-check that your IB cable connector engages fully. Wiggle your connector back and forth to be sure that both sides of the connector have locked firmly into place.
 - To remove a cable with a pinch connector, pinch both sides of the back of the connector and pull the connector away from the port.
 - To remove a cable with a pull connector, grasp the connector with one hand and push it toward the port, then pull the latch away from the port with your other hand and gently wiggle the connector away from the port.

Additional References

- Refer to the following documents, which can be found at: <http://support.hp.com/>
- HP Dual-port 4x Fabric Adapter User Guide*—for information on installing and configuring the HCA and HCA drivers
 - HP 24-Port 4x Fabric Copper Switch Hardware User Guide*—for information on the features of the switch hardware
 - HP 24-Port 4x Fabric Copper Switch User Guide*—for information on InfiniBand concepts and procedures for using the Command Line interface and Graphical User Interface (GUI)
 - HP 24-Port 4x Fabric Copper Switch Command Line Reference Guide*—for information on the commands used to manage and troubleshoot the switch
 - HP 24-Port 4x Fabric Copper Switch Chassis Manager User Guide*—for information on how to use the web-based GUI to manage and troubleshoot the switch
 - HP Serial Management Cable Guide*—for information on the serial management cable

Getting Help

For additional help, contact your HP reseller, or (in North America only) you can call Technical Support at 1-800-652-6672 or go to www.hp.com

Regulatory Notices

Class B Equipment

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit that is different from that to which the receiver is connected.
- Consult the dealer or an experienced radio or television technician for help.

Declaration of Conformity for Products Marked with the FCC Logo, United States Only

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

For questions regarding your product, contact us by mail or telephone:

- Hewlett-Packard Company
P. O. Box 692000, Mail Stop 530113
Houston, Texas 77269-2000
- 1-800-652-6672 (For continuous quality improvement, calls may be recorded or monitored.)

For questions regarding this FCC declaration, contact us by mail or telephone:

- Hewlett-Packard Company
P. O. Box 692000, Mail Stop 510101
Houston, Texas 77269-2000
- 1-281-514-3333

To identify this product, refer to the part, series, or model number found on the product.

Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by Hewlett-Packard Company may void the user’s authority to operate the equipment.

Canadian Notice (Avis Canadien)

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations
Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

European Union Regulatory Notice



This product complies with the following EU Directives:

- Low Voltage Directive 73/23/EEC
- EMC Directive 89/336/EEC

CE Compliance of this product is valid only if powered with the correct HP-provided and CE marked AC adapter.

If this product has telecommunication functionality, it also complies with the essential requirements of:

R&TTE Directive 1999/5/EC



*For a notified body number refer to the product regulatory label.

Compliance with these directives implies conformity to harmonized European standards (European Norms) which are listed on the EU Declaration of Conformity issued by Hewlett-Packard for this product or product family.

The telecommunications functionality of this product may be used in the following EU and EFTA countries:

Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, and United Kingdom.

Notice for Use in France and Italy

Italy:

E'necessaria una concessione ministeriale anche per l'uso del prodotto. Verifici per favore con il proprio distributore o direttamente presso la Direzione Generale Pianificazione e Gestione Frequenze.

License required for use. Verify with your dealer or directly with General Direction for Frequency Planning and Management (Direzione Generale Pianificazione e Gestione Frequenze).

France:

L'utilisation de cet équipement (2.4GHz Wireless LAN) est soumise a certaines restrictions: Cet équipement peut etre utilise a l'interieur d'un batiment en utilisant toutes les frequences de 2400 a 2483.5MHz (Chaine 1-13). Pour une utilisation en environnement exterieur, vous devez utiliser les frequences comprises entre 2454-2483.5MHz (Chaine 10-13). Pour les dernieres restrictions, voir <http://www.art-telecom.fr>.

For 2.4 GHz Wireless LAN operation of this product certain restrictions apply: This product may be used indoor for the entire 2400-2483.5 MHz frequency band (channels 1-13). For outdoor use, only 2454-2483.5 MHz frequency band (channels 10-13) may be used. For the latest requirements, see <http://www.art-telecom.fr>.

Notice for products incorporating 5GHz Wireless LAN devices

Frequency availability for 802.11a or 802.11h Wireless LAN is not currently harmonized throughout the European Union. For compliance requirements, users should verify with their supplier, local HP office or Telecommunications authority.

Japanese Notice

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